Appendices

Appendix A
LOG OF PROPOSED OPTIONS

The table below summarizes the various options that were proposed throughout the planning process, along with each one's relative pros and cons. Not all options are exclusive: For example, the option to replace Piers 62/63 with a flat and empty deck could be combined with a design for moorage. Rather, distinct options are presented here for clear identification and discussion as a record of the many ideas proposed along the way. Not all of these options are feasible or desirable. Those that were feasible and had the most positive benefits were incorporated into the three alternatives presented in this study.

Table A-1. Pros and Cons of Proposed Options, by Project Element

PROPOSED OPTION	PROS	CONS
PIERS 62/63		
Replace with flat and empty deck	• Provides flexibility for multiple uses • Cheaper than providing permanent structures	• May not be inviting to casual use, such as picnicking
Replace with permanent structures on deck	• May be seen as more of a destination • May generate additional revenue from permanent vendors	• Not as flexible for multiple uses • May preclude use by some events that require flat space, such as car shows
Replace, closer to the Aquarium	• Ties pier and Aquarium together as one visual unit	• Noise considerations for Aquarium animals • May jeopardize current Aquarium permits
Replace, but allow room for Port to expand cruise ship berthing	• Gives Port flexibility for future operations	• No indication that Port is interested in expanding
Replace as green park	• Provides scarce green space along waterfront	• Expensive to construct and maintain
Replace with boardwalk and pavilion	• Opens up nearshore for fish migration	• Removes concert venue from waterfront

PROPOSED OPTION	PROS	CONS
Connect new pier to Aquarium via floating boardwalk	• Provides a water's-edge connection with unobstructed views	• Floating structure may not be useable during high wave action
Connect new pier to Aquarium via stable boardwalk	• Provides a water's-edge connection with unobstructed views	
Design for moorage	• Provides scarce moorage along waterfront • Would make project easier to permit	• May add to cost of pier
Design to allow people to touch water	• Provides a unique experience	• May have public safety issues
Demolish, do not replace	• Opens up nearshore for fish migration	• City would never be able to rebuild over water at this location
Use transient barge for large special events	• Allows design of smaller pier • Frees pier design from concert considerations	• May not be allowed per code
Replace with finger pier	• Allows maximum feasible habitat enhancement	
WATERFRONT PARK		
Demolish, do not replace	• Consistent with Aquarium expansion plans • Opens up shoreline for habitat enhancement	• Removes park space from waterfront
Replace with finger pier	• Consistent with Aquarium expansion plans • Provides over-water viewing platform	• May impede fish migration
Replace with structure farther offshore	• Retains public space at this site • Opens up shoreline for habitat enhancement	• May encounter permitting issues, as Aquarium has already been permitted to demolish
SHORELINE HABITAT		
Maximum enhancement, beach along entire area	• Provides continuous maximum benefit to fish migration	• Very costly • May be impossible under Aquarium

PROPOSED OPTION	PROS	CONS
Beach at current Piers 62/63 and Waterfront Park, bench remainder of area	• Provides maximum benefit per dollar • Utilizes most efficient locations for fill	• Does not provide maximum fish benefit
Bench along entire area	• Less costly than any beach option	• Provides less than ideal fish benefit
Structural bench cantilevered from seawall	• May be less costly than bench created by fill	• Untested approach
Public access to beach areas	• Provides unique experience • Could be used by Aquarium for educational purposes	• May have public safety issues
Breakwater to create protected shoreline	• Provides additional benefit to zero-age salmonids	• Adds cost to project • May contribute to slimy beaches
Tide pools with large boulders	• Aesthetically pleasing	
Freshwater outfall collected from lid	• Provides stormwater treatment for lid runoff and freshwater input for enhanced habitat	• May be contaminated with fecal coliform
No habitat enhancement, as is	• Least costly option	• Provides no fish benefit
SR 99 TUNNEL LID		
Green open space	• Provides scarce green park space along waterfront and near Pike Place Market	• Creates inactive edges, which may pose public safety issues • Does not generate revenue
Retail focus, both sides of lid	• Activates edges of space • May extend character of the Market • Generates revenue	• May pose design constraint; shallow retail spaces and/or narrow passage along lid • May hinder views to water
Retail focus, eastern side of lid	• Activates edges of space • May extend character of the Market • Opens up western edge to views • Generates revenue	

PROPOSED OPTION	PROS	CONS
Extend lid to Belltown	• Provides more extensive connection between Downtown and waterfront	• Additional construction costs
Incorporate water features	• Visually ties lid connection to waterfront	• Maintenance issues
Parking tucked into voids under tunnel	• Provides additional parking for waterfront and Market	• May be structurally infeasible
An extension of the Market with stalls for seasonal/truck vendors	• Provides additional space for Market retail	• May not be active throughout the year, creating seasonal public safety issues • May not be utilized by Market vendors who prefer to congregate with like vendors
Incorporate service and public safety access	• Provides access for service and emergency vehicles	• May provide convenient slope for skateboarding
Provide ADA ramp from Western to lid along Pike	• Provides convenient access to Market elevator on Western	• May require redesign of some portion of Pike St Hillclimb
Route service drive underneath proposed retail	• Creates an auto-free lid	• May create spaces for people to linger that are difficult to patrol
PC-1 NORTH SITE		
Maximum development, out and up and down	• Provides maximum potential for economic development	• May block views from Market arcade • May encounter structural issues as per Burlington Northern Santa Fe (BNSF) railroad tunnel
Low profile building	• Would not block views from Market arcade	• Limits economic development; may not pencil
Provide lid to Market connection through building to Desimone Bridge	• Provides convenient connection from lid to Market • Provides additional activation for activities in the PC-1 building	
Incorporate low-income housing	• Provides needed housing • Provides additional funding sources for construction	• May be viewed as public safety concern

PROPOSED OPTION	PROS	CONS
Incorporate retail	• Provides revenue • Activates public spaces	
Incorporate flexible event space		
VICTOR STEINBRUECK PARK		
Extend onto lid	• Creates larger park space • Opens up more expansive views of water and mountains • Provides opportunity to connect to lid and remove dead end spaces	
Retain green character	• Provides scarce Downtown greenspace	
Redevelop as hardscaped plaza	• Provides multi-use space	
Redevelop as amphitheater	• Provides a new event venue with spectacular views	• May encounter structural issues as per underground parking garage
Incorporate enclosed special event space		
TRIANGLE LOT		
Extension of lid resembling Harbor Steps		
Extension of lid, greenspace		
Incorporate 2-3 story building with parking below	• Provides additional waterfront parking	
Incorporate pencil building with residential	• Provides excellent opportunity for upscale residential	• Not feasible; limited to 55 feet in height

PROPOSED OPTION	PROS	CONS
ALASKAN WAY PEDESTRIAN CROSSING		
At-grade crossing at Pike Street in front of Aquarium	• Location of most logical progression from lid to waterfront	• May be impeded by 9-foot hump in Alaskan Way; serious issue for Americans with Disabilities Act (ADA) access
At-grade crossing at Pine Street	• No “hump” issue	• Hump at Pike Street may impede northbound driver vision
At-grade crossing at Union Street	• No “hump” issue	• Hump at Pike Street may impede southbound driver vision
Pedestrian bridge from lid to Aquarium	• Provides safe and convenient crossing	• Additional cost • May encounter structural issues on waterfront side of Alaskan Way

Appendix B
PRELIMINARY ALTERNATIVES

The following preliminary alternatives were developed during early stages of the process. These alternatives are no longer being considered and are only presented here for documentation purposes. Below is a brief description of each alternative, followed by a matrix that summarizes this information.

- Alternative #1, **Belvedere,** provides an extension of Steinbrueck Park to the SR 99 lid, a new development at the PC-1 site with an extension of the Desimone Bridge to the lid, new retail development on the easterly edge of the lid and terraces to Alaskan Way – all with views to the west. A pedestrian overpass could be built to link the lid to a new Piers 62/63 that would feature a fixed concert/special event venue with retail and concession space below the seating. Waterfront Park would be removed and intertidal habitat work would focus on improving existing rip rap to create a sloping face to the Alaskan Way seawall.
- Alternative #2, **Market Street**, also extends Steinbrueck Park to the SR 99 lid, develops the PC 1 site with an extension of the Desimone Bridge to the new park atop the lid, and provides market stalls (seasonal truck vendors) along the easterly edge of the lid and other retail spaces at the triangle site to create a double-loaded, terraced open space. A pedestrian overpass could be built to link the lid to a redeveloped Piers 62/63 that would be a flat, multi-use space situated closer to the Aquarium than exists at present. Waterfront Park would be removed and intertidal habitat work would include nearshore beach enhancement at the Waterfront Park site as well as north of the new, relocated Piers 62/63.
- Alternative #3, **Eau Naturelle**, relocates the concert/special event venue to a westerly extension of Steinbrueck Park, while the rest of the SR 99 lid is largely devoted to a green open space. As in the other alternatives, the PC-1 site would be redeveloped with an extension of the Desimone Bridge. A small building at the triangle site could also support retail to activate the new park atop the lid. In this scheme, Piers 62/63 would be removed in favor of a more extensive intertidal habitat that would involve nearshore beach with a backshore above the tidal range. Waterfront Park would also be removed in favor of habitat improvements. The over-water structure of Piers 62/63 would be replaced by a narrow offshore waterfront walkway that could trace the outline of the northerly and westerly edges of the former Piers 62/63 and extend to the Aquarium on Pier 59.

Table B-1. Characterization of Options

	#1 BELVEDERE	#2 MARKET STREET	#3 EAU NATURELLE
GENERAL			
Overall Concept	• 62/63 midway between Aquarium and marina • Lid emphasizes water views	• Maximizes redevelopment on lid • Aquarium-62/63 focal point • Maximizes "active edges" on lid	• Maximum shoreline restoration • Landscaped green area on lid • Amphitheater • Taller PC-1 building
Commercial/ Retail Space (amt/ character)	• Moderate • On western edge of PC-1 facing lid; on lid in front of parking garage; on 62/63 under bleachers	• Most, relatively continuous corridor • Both sides of lid; market-style stalls lid in front of parking garage	• Minimum • On western edge of PC-1 facing lid
Open Space (amt/ character)	• Large amount on lid, mostly hardscape, terraced and ramped • Hardscape VS Park	• Fair amount on lid • Hardscape, terraced • Green VS Park with plaza	• Extensive, park-like green space on lid • VS Park is hardscape amphitheater
Views	• New views from terraces • Views from VS Park improved	• New views from deck. • VS Park views improved	• Extensive water's-edge views along 62/63 • Views from VS Park retained
Connections	• At-grade crossing of Alaskan Way	• At-grade crossing of Alaskan Way	• At-grade crossing of Alaskan Way
WATERSIDE			
Over-Water Coverage	• About the same as current	• About the same as current	• Equal to existing
Piers 62/63	• Concessions underneath permanent amphitheater seating • New pier orientation • Continuous perimeter public access	• Current stage configuration • Removable seating plus pylons and temp cover allow use during "shoulder season" • Concessions and public access south of stage allow non-performance use	• Boardwalk at outer harbor line with seating and multi-purpose glass pavilion and view tower

	#1 BELVEDERE	#2 MARKET STREET	#3 EAU NATURELLE
Activity Focus	• Separate, 62/63 and Aquarium	• Base of bridge between Aquarium and 62/63	• Aquarium and pavilion
Habitat Restoration	• Bench between northern edge of 62/63 and Aquarium • Nearshore/backshore with accessible beach south of Aquarium	• Nearshore/backshore with accessible beach north of new 62/63 • Bench along remainder of shoreline	• Extensive • Bench with tide pools south of Aquarium • Nearshore/backshore with accessible beach between Aquarium and marina
UPLANDS			
Steinbrueck Park	• Expanded over lid to retain Mt Rainier view • Connection through park removes dead-end space • Grand view plaza with landscaping	• Expanded over lid to retain Mt Rainier view • Combination hard and softscape with gently sloping green space	• Hardscaped amphitheater, seats facing water, with temporary concession structures
PC-1	• Retail at western and northern edge, connected to Market with pavilion/atrium extension of Desimone Bridge • 2-3 stories above Western	• Retail at western and northern edge, connected to Market with pavilion/atrium extension of Desimone Bridge • 1-2 stories above Western	• Single 6-8 story large building with office and/or residential, retail facing lid, connected to Desimone Bridge
Triangle Lot	• Terraces and steps with some small retail (e.g. Harbor Steps) • Trees along Alaskan Way	• Deck as extension of lid terrace/bridge over Alaskan Way • Building (3-story above parking) with vent	• Greenscape and terraced • At-grade pedestrian crossings emphasized
South of Pike St.	• Open with trees	• Open with trees	• Floral bed

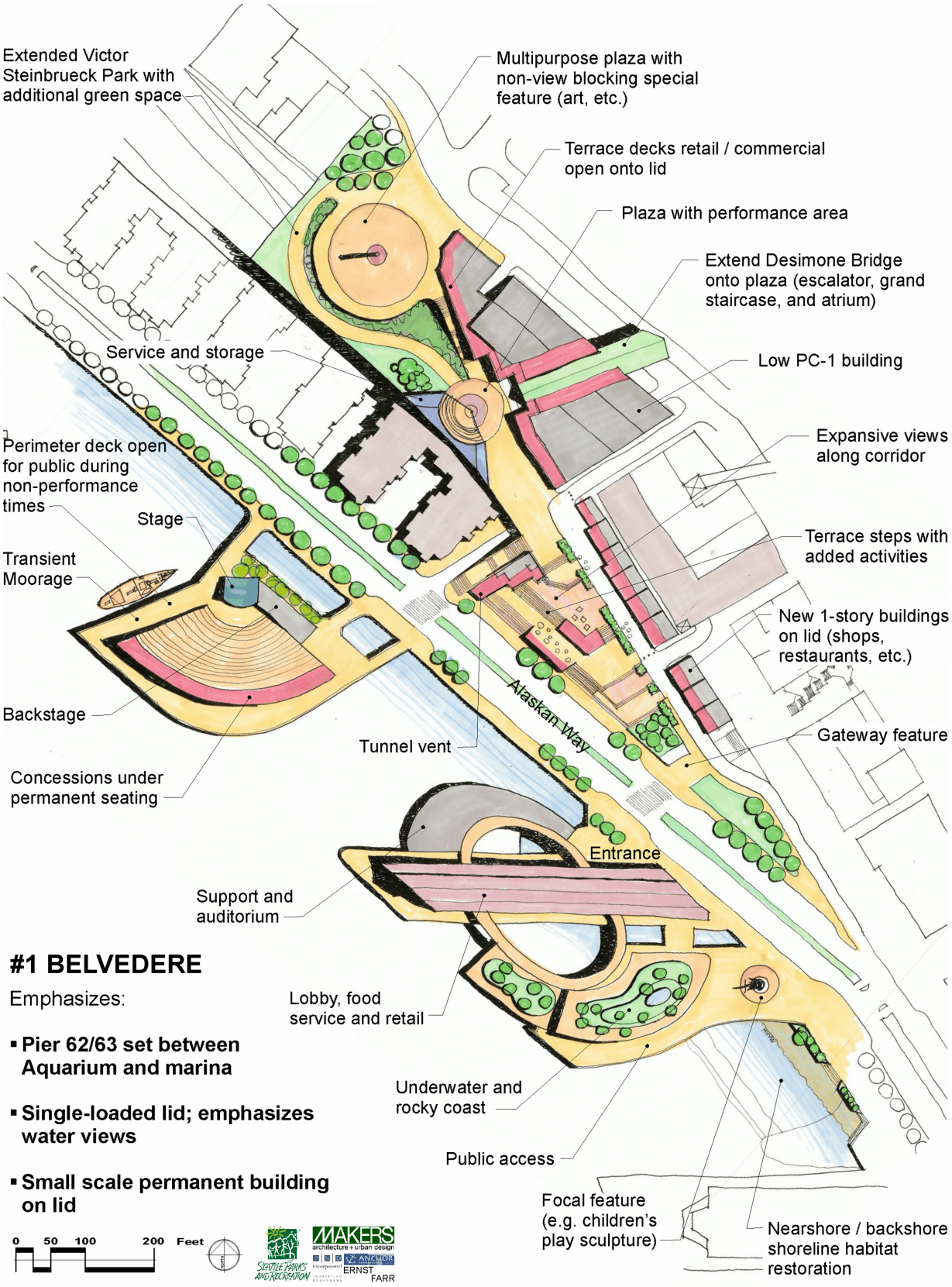

Figure B-1. Alternative #1, Belvedere.

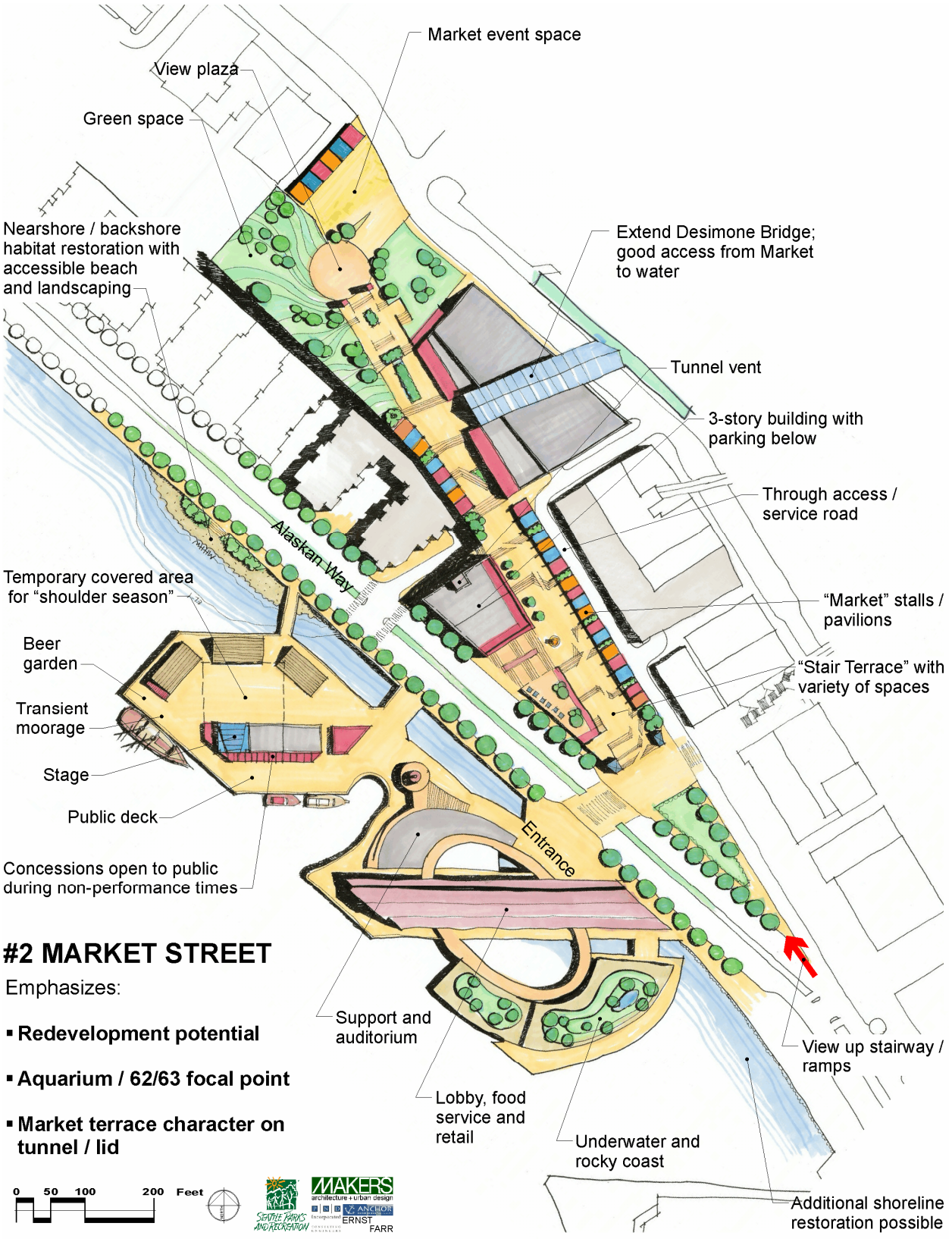

Figure B-2. Alternative #2, Market Street.

Figure B-3. Alternative #3, Eau Naturelle.

Appendix C
CPTED GUIDELINES

Crime Prevention Through Environmental Design (CPTED) refers to a group of strategies intended to reduce the fear of crime and the opportunities to commit crime. It acknowledges that the existing environment can influence criminal behavior. The application of CPTED guidelines is critical to the safety and success of new parks. The guidelines below are based on the City of Seattle's Facility Standards and the Seattle Police Department's Crime Prevention Program.

- **Natural Surveillance:** Natural surveillance, or "passive surveillance," occurs when areas of the park are open to view by the public and neighbors. For example, the ability of neighboring residents or workers to look down on the park is a major crime deterrent. Where possible, urban park and plaza design should maximize the number of "eyes on the park." Another aspect of natural surveillance is the ability of an officer driving by or through the park to see the facilities that might be targeted by offenders. The screening and vegetation around the parking lots should be trimmed to allow visibility of the ground plane. Orient restrooms, shelters, and other structures so that they are easily visible from the roadways and parking areas.

- **Lighting:** Lighting should reflect the intended hours of operation; i.e., lighting of playfields or structures in local parks may actually encourage after-hour criminal activities. Motion-sensing lights perform the double duty of providing light when needed and letting trespassers know that "they have been seen."

  Unless there is a compelling reason to the contrary, provide at least the following minimum light levels:

  - Areas of high activity, attractions (such as fountains), or special services (such as phone booths): 4 foot-candles.
  - Pedestrian paths: 2 foot-candles.
  - General areas of low activity where security is a concern and parking: 1 foot-candle.

  Use cut-off fixtures to avoid light spill to adjacent properties.

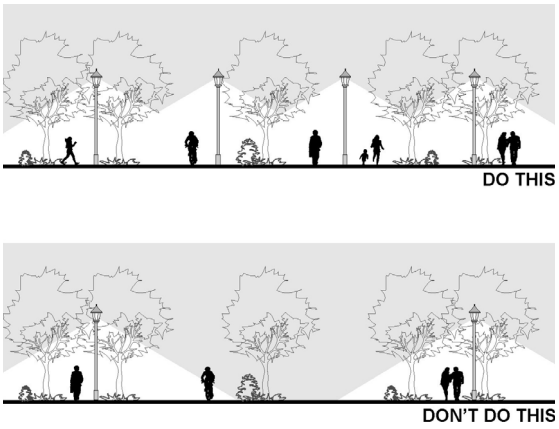

Figure C-1. Appropriate lighting can improve the safety of the nighttime environment.

- **Landscaping:** Avoid irregularly shaped sites that offer hiding places. Plants should follow the 3-to-8 rule of thumb: hedges no higher than 3 feet and tree canopies starting no lower than 8 feet. This is especially important around entryways and windows. Landscaping should also be designed so that it does not interfere with lighting design.

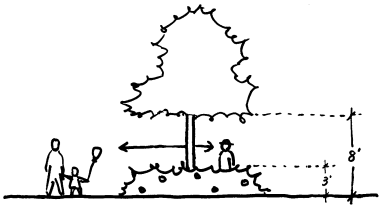

Figure C-2. Landscaping should be mostly transparent between 3' and 8', or roughly eye level.

- **Entrances:** Park entrances should be prominent, well-lit, and highly visible from inside and outside of the park.
- **Windows:** Encourage windows that look out onto parks and provide good natural surveillance. Parks with residential and/or other adjacent uses that look out onto the park space will discourage criminal activity. Retirees, stay-at-home parents, and people working from home offices can provide good surveillance for the neighborhood during the day.

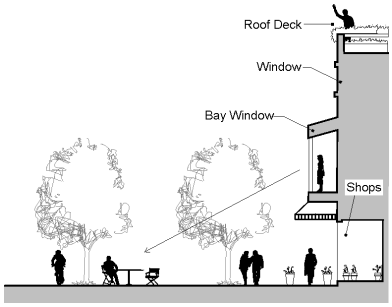

Figure C-3. Eyes on a park from adjacent windows can discourage criminal activity.

- **Natural Access Control:** Access control refers to homes, businesses, parks, and other public areas having distinct and legitimate points for entry and exit. However, this should also be balanced to avoid "user entrapment"—not allowing for easy escape or police response to an area. Generally, crime perpetrators will avoid areas that only allow them one way to enter and exit, that have high visibility, and/or that have a high volume of user traffic. This can be assured by:
  - *Entry Points:* Open space designs with open, uninhibited visibility and a defined entry point generally, but not always, can discourage criminal activity.
  - *Circulation:* Entries and walkways should be emphasized with lighting, landscaping, and signage so that users can clearly see them.
  - *Buildings:* Building entrances should be accentuated through architectural elements, lighting, landscaping, or other treatments.
  - *Borders:* Visible and attractive borders that separate the public open space from private spaces should be provided.
  - *Restrooms:* Restrooms should be located in visible, well-trafficked areas—preferably visible from an adjacent roadway, but the park should be visible from adjacent uses.
- **Territoriality:** Territoriality means showing that your community "owns" your neighborhood. While this includes removing graffiti and keeping buildings and yards maintained, it also refers to small personal touches. Creating flower gardens or boxes, putting out seasonal decorations, or maintaining the plants in traffic circles sends a clear message that people in the vicinity care and won't tolerate crime in their area. This approach is often called "fixing broken windows" after the book by George Kelling and Catherine Coles, which demonstrates that such proactive actions can reduce crime.

- **Maintenance and Target Hardening:** Well-maintained parks send the message that the area is well cared for, observed, and owned. Target hardening, as the name suggests, is constructing the facility so that it is a difficult crime target and deals more with the design of the individual site feature than the lid's layout. Target hardening includes methods such as:
  - *Boundaries:* Utilize appropriate plants to maintain site lines.
  - *Materials:* Durable, high-quality, and maintainable exterior materials should be used.
  - *Walls:* Walls should be treated in a way that deters graffiti. Provide texture, anti-graffiti coverings, or landscaping, as appropriate.
  - *Locking Systems.*
- **Defensible Space:** Do not locate or design open spaces where potential perpetrators can lurk or commit a crime and then flee via a convenient escape route.